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ABSTRACT

The Maryland Workforce Educational Needs Assessment Survey was conducted to determine employer satisfaction with Maryland's educational systems and to identify areas where more training is needed. In June 1999, questionnaires were mailed to 8,175 Maryland employers. An additional 2,395 questionnaires were sent to business organizations and local chambers of commerce for distribution to their members. The 525 completed surveys reflected a diverse distribution of industries, geographic locations, and company sizes. The following were among the main findings: (1) Maryland had increasing difficulties filling positions requiring nearly every educational level; (2) approximately two-thirds of responding employers rated four-year colleges and universities and graduate programs above average to excellent, whereas only 18% rated public high schools better than average; (3) employers listed more than 1,000 types of jobs for which qualified applicants are difficult to find; (4) 45% of employers believed that the lack of qualified employees has affected their firm's ability to do business in Maryland over the past year; and (5) based on critical occupational needs identified, workers will need technical computer-related skills, managerial skills, and basic skills; and (6) specialized skills training offered by Maryland employers is increasing. (Thirty-three tables/figures are included. The survey instrument is appended.) (MN)

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MARYLAND WORKFORCE EDUCATIONAL NEEDS ASSESSMENT SURVEY

October, 1999

Prepared for:

Maryland Business Roundtable for Education

Maryland Department of Business and Economic Development

Maryland Economic Development Commission

Maryland Higher Education Commission

Maryland State Department of Education

CE 080 987

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EXECUTIVE SUMMARY

The Maryland Business Roundtable for Education and their partners established several objectives to determine the level of satisfaction and anticipated needs of employers across Maryland regarding the state's educational systems and how well they are preparing potential employees for the workforce. These objectives and principal findings from this study are summarized as follows:

Employers' critical skill shortages

Maryland businesses are still having significant difficulties finding qualified employees to fill all types of positions. Computer engineers or analysts, manufacturing or skilled workers, engineers, and laboratory or technical personnel are the most difficult positions to fill among companies who need these types of employees.

- 91% of companies that hire computer engineers or analysts report having the greatest difficulties compared to 73% in 1997.
- 90% of companies that hire manufacturing or skilled workers are having difficulties compared to 79% in 1997.

The need for supervisory or management personnel represents a broader critical need as these individuals are required by more types of companies than any other occupation considered.

- 71% of the market has both a critical need and difficulty hiring supervisory or managerial personnel.
- 63% of the market have difficulties hiring clerical, administrative and secretarial support.
- 48% have difficulties hiring sales or marketing personnel.
- 47% and 36% have both the need and difficulty finding manufacturing or skilled workers and computer engineers or analysts, respectively.

Academic programs for which there are critical needs

Maryland businesses are having increasing difficulties filling positions requiring nearly every educational level. It has become particularly difficult to find qualified applicants with a bachelor's degree in a technical or professional field such as business, computer science or engineering or with a graduate or professional degree. Only the need for workers with less than a high school education has remained unchanged.

- 83% of those that hire applicants with a bachelor's degree in a technical or professional field are having difficulties finding qualified employees compared to 55% in 1997.
- 76% of those that hire applicants with a graduate or professional degree are having difficulties compared to 53% in 1997.

Considering both the market need for graduates requiring particular educational credentials and the difficulty in finding and hiring these candidates, the most critical market need is for graduates with a bachelor's degree in a technology or professional field.

- 61% of companies both have the need and have had difficulties hiring applicants with a bachelor's degree in a technical or professional field.
- 49% have a need and have had difficulty hiring applicants who have been through a high school career and technology education program.

Employers' level of satisfaction with educational institutions

There is room for improvement in ratings business executives gave educational institutions on being able to provide their company with a qualified and educated workforce. There is clear differentiation in the ratings of different educational institutions; indicating respondents have a defined perception of how specific institutions are performing.

Approximately two-thirds rated 4-year colleges and universities and graduate programs above average to excellent, a quarter were neutral, and seven percent gave below average to poor ratings.

- 68% rated private 4-year colleges and universities and private graduate programs above average to excellent.
- 62% rated public 4-year colleges and universities and 65% public graduate programs above average to excellent.
- 49% rated community colleges above average to excellent.

The low point in ratings of educational institutions is for public high schools. Only 18% rated public high schools better than average, while more than a third rated them below average.

- 50% rated private high schools above average to excellent.
- 18% rated public high schools above average to excellent.

A labor shortage has raised demands for employees with varying levels of education. Nearly three-quarters (71%) of companies hire employees whose highest educational credential is a recent high school diploma or GED certificate. This is an increase from 1997 when 63% hired high school graduates or less.

Many reasons were cited for employers having difficulties finding qualified applicants for jobs requiring a high school diploma. Inadequate attendance and punctuality was cited most frequently by two-thirds of employers. Inadequate written communication, problem solving, and math skills were cited by more than half of employers.

How post-secondary education can better assist Maryland business and industry

Employers listed over 1,000 types of jobs where they have a strong current need and have had difficulties finding qualified applicants. Half of these job categories require a bachelor's degree. Another 25% require levels of education beyond a four-year college degree. A quarter requires a community college degree or certificate. Many of the same job categories require more than one level of education.

The job categories requiring higher education most frequently mentioned by employers as areas where they have a strong current need, and for which they have had difficulty attracting qualified applicants, are for positions in computer and information sciences, business and management, engineering, marketing and distribution, and business and office.

Statewide and regional information on workforce needs

Nearly half (45%) of Maryland employers believe the lack of qualified employees has affected the ability of their firm to do business in Maryland over the past year. This belief is universally shared across different industries and sizes of companies. Concern has also grown since 1997, when 38% held this belief. Problems are manifested in lower productivity, not meeting deadlines and lower quality of business products and services.

Nearly all business employers (97%) recruit qualified employees locally. Nearly all (91%) also retrain and promote in-house employees. Other activities used to fill open positions are significantly less common. However, all recruiting practices have increased since 1997 including recruiting from other parts of the state, training less qualified employees and training them, hiring temporary employees, and recruiting from competitors.

The survey showed that academic credentials of students are extremely important to employers, as they use such credentials in making hiring decisions. Nearly two-thirds of companies report requesting a transcript to verify academic records of job applicants either always (17%) or sometimes (48%).

Knowledge and skills workers will need to possess

Based upon the critical occupational needs identified, workers will need technical computer-related skills, managerial skills, and basic skills depending upon the position. The types of training being provided is an indicator of the types of skills businesses need.

Reasons for providing training range from improving computer-related skills to personal or career development and basic skills. Three quarters of business employers provide training to improve computer and technology skills. More than half provide training for technical skills and to provide certification or licensing. The large incidence of usage for certification may relate to the increased use of equipment and software manufacturers, as employees may be obtaining certification for technical skills from companies like Microsoft and Novell.

After technology, the next most heavily used type of training is for interpersonal skills such as teamwork, promoting personal and career development, and other courses to improve productivity.

Roughly a third of employers provide training for basic work habits, oral communication skills, and problem solving skills.

Needed training programs for industries

Specialized skills training is on the rise among Maryland employers. Nearly all (92%) business employers offer some type of specialized skills training – up from 68% in the 1997 study. The anticipated need for future training continues to increase.

Over three-quarters of respondents report having an in-house training department and half use outside consultants and industry or trade associations to provide training. Other significant providers of training for business employees include equipment or software manufacturers and community colleges. The share of training provided by colleges and universities has declined from 66% to 26% since 1997.

It should be noted that the incidence of different organizations providing training for employees rises with the size of the company. Smaller companies are much less likely to have in-house training departments, or to utilize outside consultants, or advanced technology centers. Larger companies, with over $10 million in sales, are twice as likely to use colleges, universities, and community colleges than smaller companies. The largest source of training for small companies is industry or trade associations.

Suggested State Policy Initiatives

Most employers believe all of the suggested state policy actions to improve job skills in the workforce are important, although some are more preferred over others. The same top four issues were also ranked most important in the 1997 study.

- 78% place greatest importance on improving linkages between businesses and higher education.
- 74% place importance on improving and expanding high school career and technology education programs.
- 66% place importance on improving and expanding the number of community college occupational courses and programs.
- 64% place importance on improving and expanding community college customized education and training programs.

While community colleges received lower ratings than four-year colleges in preparing students for the workforce, employers are more likely to look to community colleges for specialized training of existing employees.

PURPOSE AND METHODOLOGY

The purpose of the Maryland Workforce Educational Needs Assessments Survey is to determine the level of satisfaction and anticipated needs of employers across Maryland regarding the state's educational systems and how well they are preparing potential employees for the workforce. To this end, a number of objectives have been established that are outlined as follows:

- To determine employers' level of satisfaction with educational institutions in preparing graduates for the workplace.
- To gauge changes in employer satisfaction with recent high school graduates.
- To keep current on employer workforce needs by identifying the kinds of knowledge and skills workers will need to possess.
- To be aware of the views of employers about how post-secondary education can better assist Maryland business and industry.
- To be able to identify the specific academic programs and/or occupational areas that are in strong demand by employers and for which they have not been able to recruit sufficient applicants for job openings.
- To identify critical skill shortage areas by industry and region.
- To identify needed training programs for industries.
- To obtain statewide and regional information on workforce needs.

The Maryland Business Roundtable for Education in partnership with the Maryland Department of Business and Economic Development, the Maryland Economic Development Commission, the Maryland State Department of Education and the Maryland Higher Education Commission contracted with Hollander Cohen & McBride to conduct the second Maryland Workforce Skills Survey. The first survey was conducted during the summer of 1997.

The sponsoring organizations worked with Hollander Cohen & McBride to develop the survey instrument, which was pre-tested with sponsors and a group of corporate human resource professionals from different industries.

Upon approval of the survey instrument, questionnaires were mailed to 8,175 employers between June 11 and June 22, 1999. A sample from conveniently available sources was designed to reach a large base of businesses both randomly selected and those involved in various business organizations. Most of the surveys (5,780 questionnaires) were mailed directly to employers using mailing lists from the Maryland Chamber of Commerce, Greater Baltimore Committee, Dun & Bradstreet, Maryland Department of Business & Economic Development, High Technology Council of Maryland, Greater Washington Board of Trade and Maryland Business Roundtable for Education. In an effort to ensure adequate geographic diversity in the sample, another 2,395 questionnaires were sent through business organizations and local chambers of commerce for distribution to their members. The coordination of list development, printing, mailing, and follow-up was handled by the Maryland Business Roundtable for Education.

Postage-paid business reply envelopes were provided for respondents to mail completed questionnaires to the offices of Hollander Cohen & McBride for tabulation and analysis. There were a total of 525 completed surveys returned.

It should be noted that in any self-administered survey, those who hold the most extreme views either positive or negative are most likely to respond by completing a questionnaire concerning an issue of interest. In order to assess the possibility of non-response bias, a telephone study was conducted with a random selection of 100 business decision-makers who had not responded to the survey using a portion of the questions from the mail study. This was done to determine if answers from those completing the mail survey were different from those contacted randomly by phone. There were no significant differences on most key questions (questions 5a, 6d, 6e, 7e, 7f, 8). The exceptions were issues related to satisfaction and difficulty in hiring high school graduates (questions 6a, 7b). Telephone respondents were more satisfied with public high schools in preparing the workforce, but have greater difficulty finding qualified workers who only have a high school diploma.

Surveys were returned from a diverse distribution of industries, geographic locations and various sizes of companies. Relative to the actual distribution of establishments, geographic and industry distributions of returned surveys are generally representative. There is a lower proportion of trade establishments and higher proportion of manufacturing establishments among returned surveys. However, given the size and number of branches of retail trade establishments relative to manufacturing, weighting was not deemed necessary.

Company Location	Actual Distribution of Establishments*	Survey Distribution of Respondents
Suburban Baltimore (City and Central Md.)	49%	46%
Suburban Washington	34%	27%
Western Maryland	4%	9%
Lower Eastern Shore	4%	7%
Upper Eastern Shore	4%	6%
Southern Maryland	4%	5%
Non-classified	1%	0%
Total	100%	100%

Sector	Actual Distribution of Establishments*	Survey Distribution of Respondents
Agriculture, Forestry, Fishery & Mining	2%	1%
Construction	11%	9%
Manufacturing	3%	20%
Transportation, Communication & Utilities	4%	6%
Trade	26%	10%
Finance, Insurance & Real Estate	8%	10%
Services	42%	43%
Public Administration	4%	1%
Total	100%	100%

* *Source: Maryland Department of Business & Economic Development; ES-202 Data*

Where applicable, comparisons are made to the previous study completed in 1997. In some questions, rating scales were converted from a four-point scale to a five-point scale in this study. This was done to allow for a neutral response and to provide more definitive findings. Industry research has shown that respondents have a positive bias in using a four-point scale, when in fact they may be neutral on a particular issue. The previous study used a combination of mail and telephone surveys in the collection of data.

Replies were tabulated by the staff of Hollander Cohen & McBride. Job categories for higher education positions in question 19 were coded by the Maryland Higher Education Commission. The Maryland State Department of Education provided codes for positions requiring only a high school degree. Cross tabulations of the data were prepared showing replies to all questions for the entire sample, as well as for subgroups from which this report was developed.

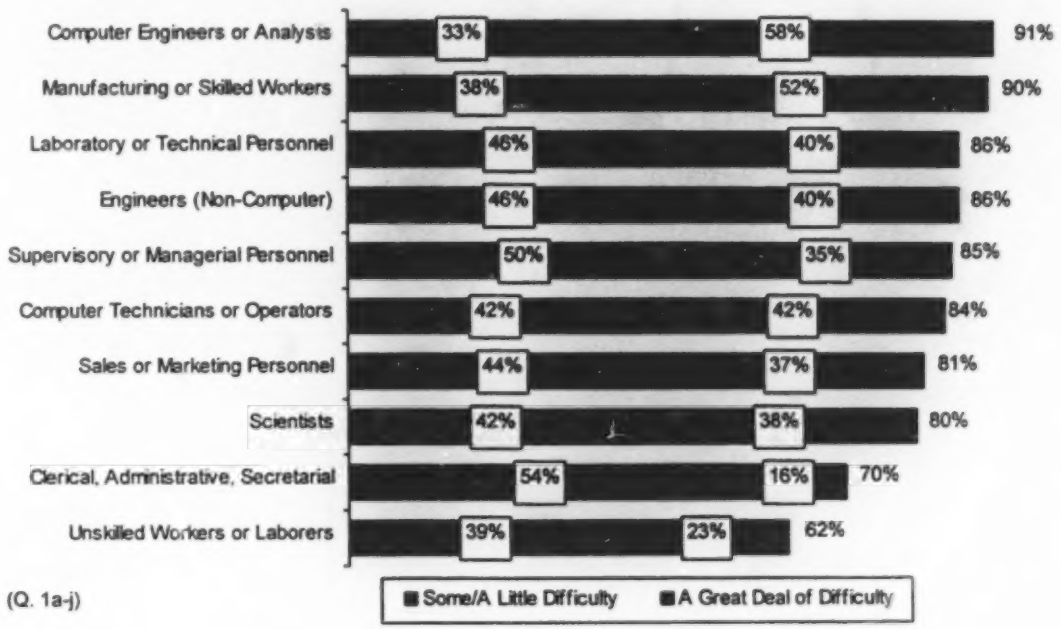
DETAILED FINDINGS

EMPLOYER OCCUPATIONAL NEEDS

Computer engineers or analysts, manufacturing or skilled workers, engineers, and laboratory or technical personnel are the most difficult positions to fill among companies who need these types of employees. Positions requiring unskilled workers or laborers are less difficult fill relative to other occupations, although 62% of employers needing this type of worker still have difficulties.

Degree of Difficulty in Hiring Qualified Workers By Occupation

(among those for whom the job classification is applicable)



Difficulties in hiring supervisory or managerial personnel, and sales and marketing personnel, as well as filling clerical, administrative and secretarial positions are more pronounced in smaller companies than larger companies. Other positions are more industry specific, and the degree of difficulty in filling these positions varies little by the size of the company.

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The difficulties in hiring qualified workers in every listed job category are significantly higher than was found in the 1997 study. As in 1997, the greatest degree of difficulty is in finding computer engineers or analysts and manufacturing or skilled workers. The largest increase in difficulty can be found among employers seeking qualified supervisory or managerial personnel and clerical, administrative, and secretarial occupations.

Trends in Hiring Difficulties By Occupation

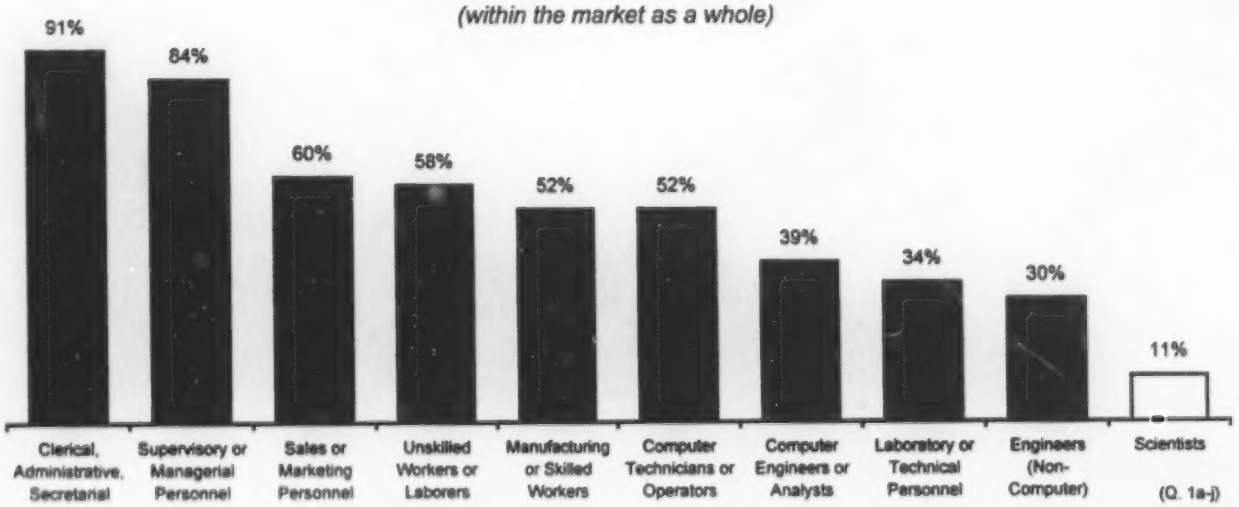
(% having some/great deal of difficulty finding specified qualified worker)

	1997	1999	% Change
Computer Engineers or Analysts	73%	91%	+25%
Manufacturing or Skilled Workers	79%	90%	+14%
Laboratory or Technical Personnel	68%	86%	+26%
Engineers (Non-Computer)	68%	86%	+26%
Supervisory or Managerial Personnel	64%	85%	+33%
Computer Technicians or Operators	65%	84%	+29%
Sales or Marketing Personnel	64%	81%	+27%
Scientists	63%	80%	+27%
Clerical, Administrative, Secretarial	52%	70%	+35%
Unskilled Workers or Laborers	49%	62%	+27%

Some of the listed positions are universally applicable to nearly all types of companies, while others are industry specific and represent a smaller number of companies and opportunities. Nearly all employers have a need for clerical, administrative and secretarial positions, as well as supervisory or managerial personnel. Far fewer companies have a need for scientists and engineers.

Need for Specific Occupations

(within the market as a whole)



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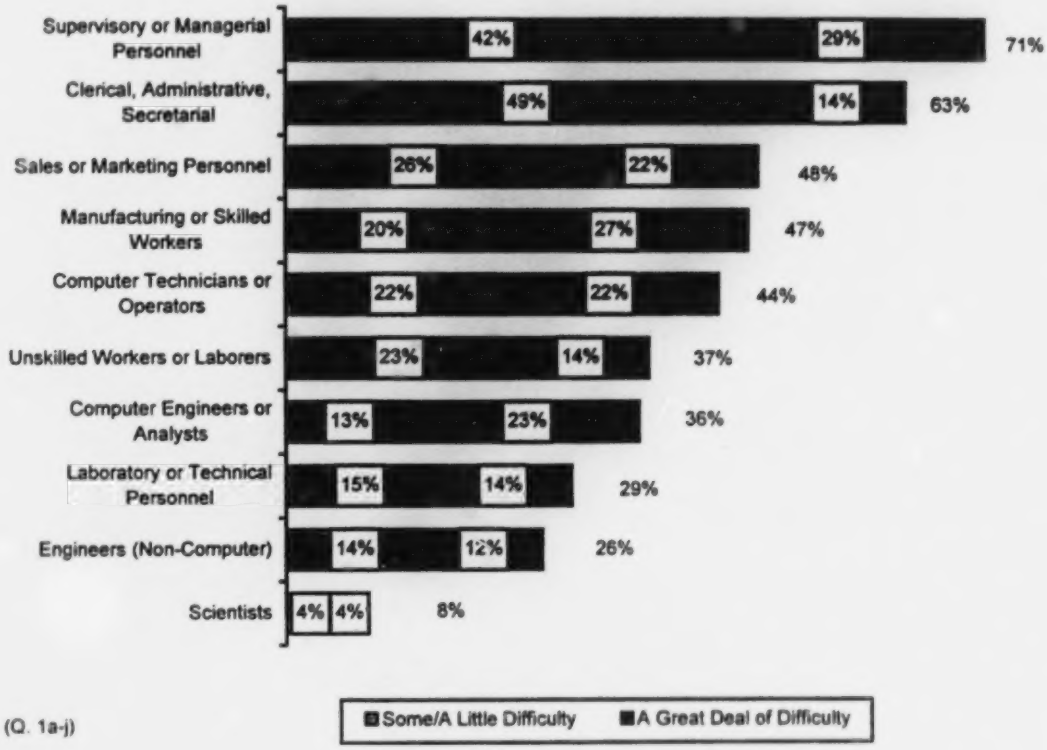
When accounting for the overall market need and the degree of difficulty in filling specific positions, supervisory or managerial positions represent the most critical need in the market. There is also a broad market need for clerical, administrative and secretarial positions, sales and marketing personnel, manufacturing or skilled workers, and computer technicians or operators. It is difficult to fill positions for scientists and non-computer engineers, but the need is less broad across the market.

Degree of Difficulty in Hiring Qualified Workers By Occupation

(within the market as a whole – including those with no need for particular positions)



(Q. 1a-j)

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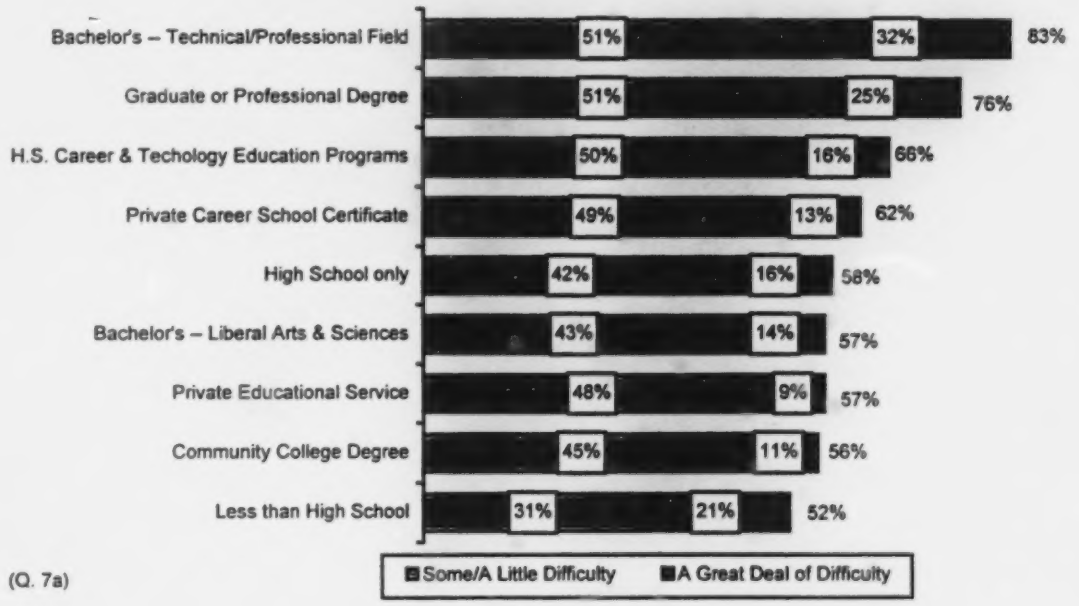
EMPLOYER NEEDS RELATIVE TO EDUCATIONAL REQUIREMENTS

Employers have the greatest degree of difficulty in finding and hiring employees for occupations that require a bachelor's degree in a technical or professional field such as business, computer science, or engineering. Among companies with the need, it is also difficult to find and hire workers for occupations requiring a graduate or professional degree, as well as for occupations requiring graduates of a high school career and technology education program.

Degree of Difficulty in Hiring Qualified Workers By Education Level

(among those who hire workers at specified level)



(Q. 7a)

Since 1997, it has become increasingly difficult to fill positions at nearly every educational level. Only the perceived difficulty of hiring an employee with less than a high school diploma has remained level. It has become particularly difficult to locate applicants with a bachelor's degree in a technical or professional field such as business, computer science or engineering or with a graduate or professional degree. Even firms that hire graduates with a bachelor's degree in liberal arts and sciences have reported greater difficulty in finding qualified workers.

Trends in Hiring Difficulties By Education Level

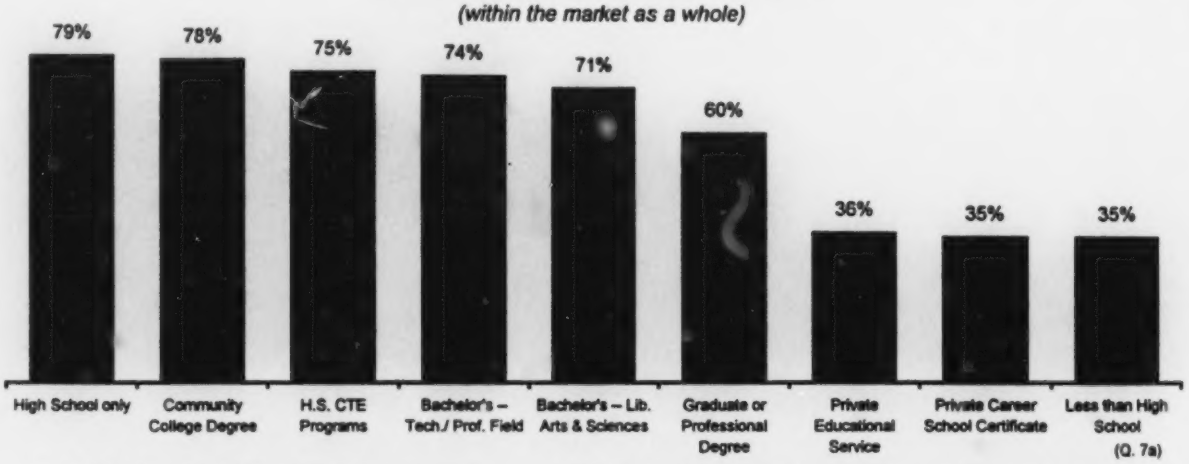
(% having some/great deal of difficulty finding specified qualified worker)

	1997	1999	% Change
Bachelor's – Tech./Professional Field	55%	83%	+51%
Graduate or Professional Degree	53%	76%	+43%
High School CTE Programs	56%	66%	+18%
Private Career School Certificate	-	62%	-
High School only	51%	58%	+14%
Bachelor's – Liberal Arts & Sciences	42%	57%	+36%
Private Educational Service	-	57%	-
Community College Degree	48%	56%	+17%
Less than High School	53%	52%	- 2%

Nearly three-quarters of all companies have a need for high school graduates, high school career and technology education program graduates, community college graduates, and those with a bachelor's in liberal arts and sciences or a technology or professional field.

Need for Specific Education Levels

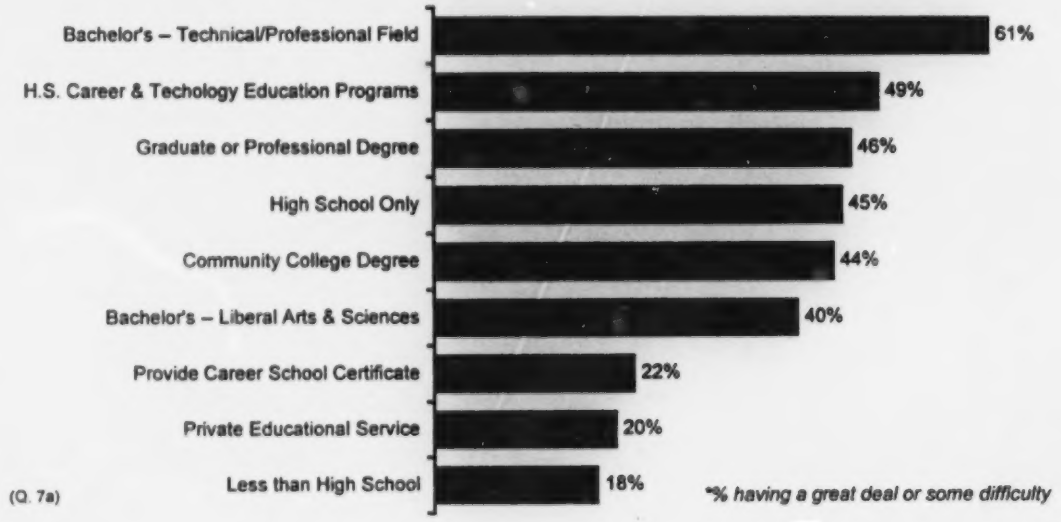
(within the market as a whole)



Considering both the need for graduates requiring particular educational requirements and the difficulty in finding and hiring these candidates, the most critical market need is for graduates with a bachelor's degree in a technology or professional field. There is also a strong demand for high school career and technology education program graduates. There is a fairly equal need for graduates with a high school degree, a community college degree and a graduate or professional degree. The need and difficulty in finding someone with a bachelor's degree in liberal arts and sciences follows closely behind.

Degree of Difficulty* in Hiring Qualified Workers By Education Level

(within the market as a whole – including those with no need for particular education levels)



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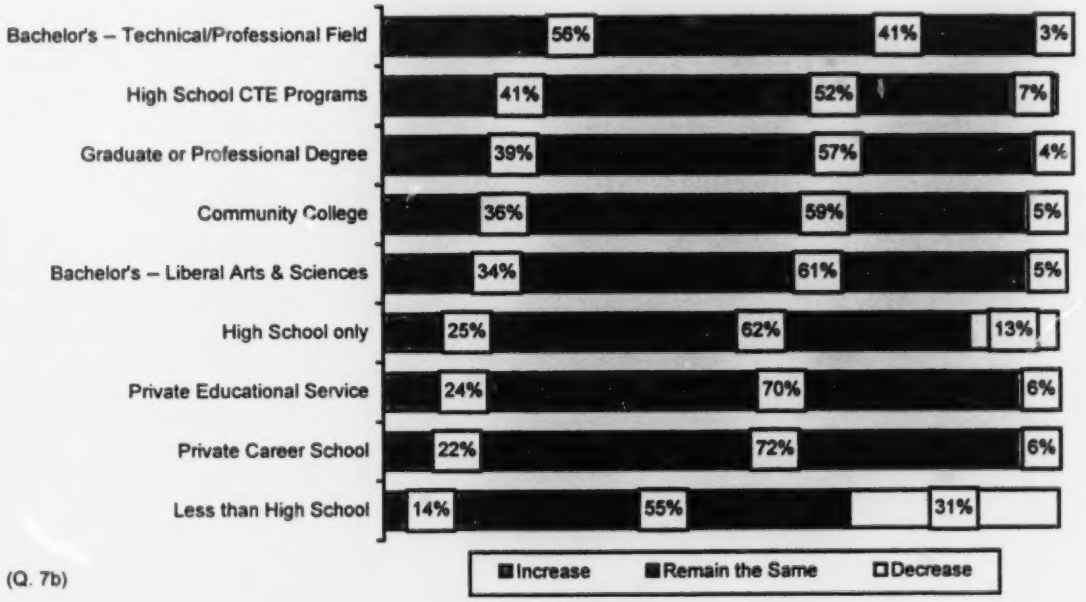
Over the next five years, employers anticipate the need for the same level of qualified employee they are having difficulty finding today. More than half of the employer market anticipates an increase in demand for workers with a bachelor's degree in a technical or professional field. Significant increases in demand are also anticipated for those going through high school career and technology education programs, those with a graduate or professional degree, those going to community college, and those getting a bachelor's degree in liberal arts and sciences. A net decline in demand is anticipated for those with less than a high school diploma.

Anticipated Future Need for Workers By Education Level

(over the next five years)



(Q. 7b)

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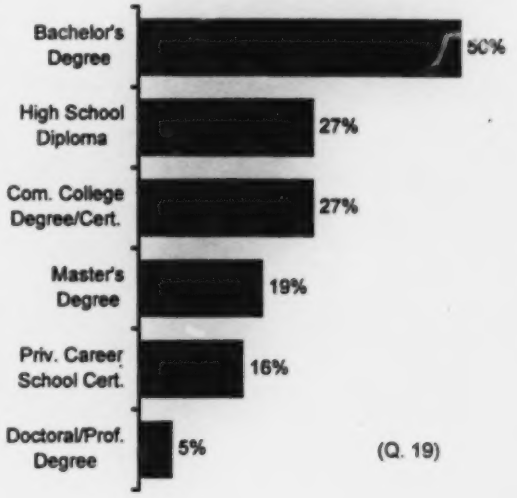
Employers were asked to list specific occupations that they have a strong current need to fill and for which have had difficulty attracting qualified candidates. Employers often listed multiple jobs and multiple levels of educational attainment in their list of requirements. The following chart shows the percentage of jobs listed for each educational level. Percentages add to more than 100% because many of the same job types were listed as requiring multiple educational levels.

Of the 1,000 job categories listed by employers as currently being difficult to fill, half require a bachelor's degree. Another 25% of jobs require levels of education beyond a four-year college degree. A quarter of the jobs listed require a community college degree or certificate and a quarter will only need a high school diploma.

Employer Requirements for Needed Positions that are Difficult to Fill

(% of Jobs Listed)



(Q. 19)

Most Frequently Mentioned Job Categories Requiring Higher Education*

(number of positions mentioned)

Computer & Information Sciences	113
Business & Management	111
Engineering	102
Marketing & Distribution	77
Business & Office	74
Health Sciences	48
Engineering & Related Technologies	45

**Jobs for which employees currently have a strong current need and have difficulty filling*

The job categories requiring higher education most frequently mentioned by employers as areas where they have a strong current need, and for which they have had difficulty attracting qualified applicants, are for positions in computer and information sciences, business and management, engineering, marketing and distribution, and business and office.

Significantly fewer of the job openings that employers have difficulty filling require just a high school education. The most frequently mentioned jobs requiring this level of education are in business management and finance and manufacturing and engineering technology.

Most Frequently Mentioned Job Categories Requiring a High School Education*

(number of positions mentioned)

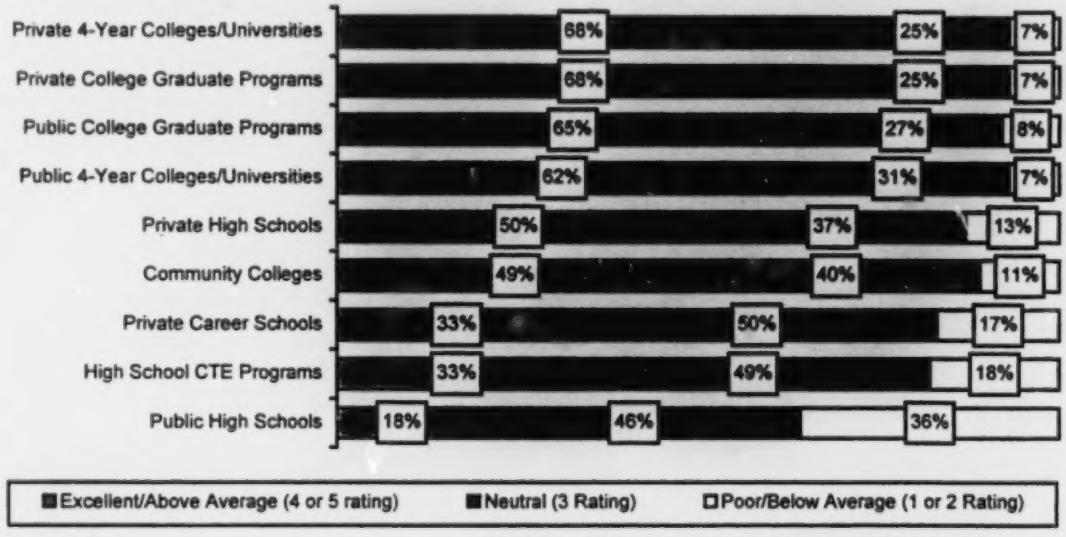
Business Management & Finance	64
Manufacturing & Engineering Technology	48

**Jobs for which employees currently have a strong current need and have difficulty filling*

EMPLOYER SATISFACTION WITH EDUCATIONAL INSTITUTIONS

There is room for improvement in ratings business executives gave educational institutions on being able to provide their company with a qualified and educated workforce. Some frustration is likely due to a smaller pool of applicants in a time when unemployment is very low. Other neutral ratings may be due to a lack of familiarity with particular education options. However, there is clear differentiation in the ratings of different educational institutions, indicating respondents have a defined perception of how specific institutions are performing.

Educational Institution Effectiveness in Providing a Qualified Workforce



(Q. 6) *(Ratings on a 5-point scale where 5=Excellent and 1=Poor)*

Roughly two-thirds of the business community rate four-year colleges and universities and graduate programs above average to excellent. These ratings are high relative to ratings of other educational institutions in this study, but have room for improvement when considered from the perspective of other commercial and organizational customer satisfaction studies. In addition, few respondents give these institutions the highest possible rating. Using a five-point scale, 62% of business respondents gave undergraduate programs at public four-year colleges and universities above average ratings (a four or five score). However, only 13% gave these institutions an excellent rating (five on a five-point scale). Only 18% gave graduate programs at public colleges and universities an excellent rating. Private graduate and undergraduate programs received slightly higher ratings than public institutions, but still only 16% give private undergraduate programs and 20% give private graduate programs an excellent rating. These institutions are not seen as performing below average to poor, as only 7% gave this rating.

Half of the business community rated community colleges above average to excellent, which is significantly less than the ratings of colleges and universities, but better than those of public high schools.

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Only a third rated high school career and technology education programs and private career schools above average to excellent. A low rating on high school career and technology education programs would not appear consistent with a growing need for these types of graduates. Nearly half give these institutions a neutral rating, either indicating a lack of familiarity with these types of programs or that these students are not that well prepared.

The low point in ratings of educational institutions is for public high schools. Only 18% rated public high schools better than average, while more than a third rated them below average. Private high schools score significantly higher in the perceptions of the business community than public high schools, but lower than undergraduate and graduate schools

Educational Institution Effectiveness

	1999 Ex./Above Avg. (4 or 5**)
Private 4-Year Colleges/Universities	68%
Public 4-Year Colleges/Universities	62%
Community Colleges	49%
Private High Schools	50%
Public High Schools	18%

***on a 5-point scale* (Q. 6)

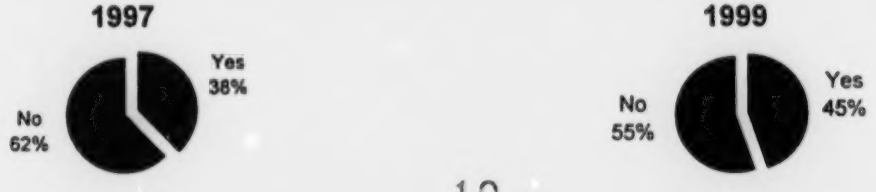
Comparisons to the previous study in 1997 cannot be directly made, but are similar in the relative ranking of institutional ratings. The 1997 study used a four-point scale that did not allow for a neutral response, which is very common in public opinion polls. A neutral perception will result in upward bias on a four-point scale. This study uses a five-point scale to clearly differentiate above and below average opinions. When comparing the top two ratings of a four-point scale with the top two ratings of a five-point scale, the four-point ratings will be higher. Though not directly comparable, 1997 ratings showed that employers were only half as satisfied with public high schools as they were with private high schools and community colleges. Also, employers were 30% more satisfied with public and private colleges and universities as community colleges.

Some confirmation of these findings for public high schools, as well as indications of a national trend, can be found in a study by Public Agenda mentioned in the January 11, 1999 issue of Education Week. Roughly 80% of employers in this national study give recent public high school graduates only a poor to fair rating on such key skills as grammar, spelling, writing, and work habits. Results from this Maryland study show that 82% give public high schools a neutral to poor rating in providing a qualified and educated workforce.

CURRENT LABOR MARKET CONDITIONS

Nearly half (45%) of Maryland employers believe the lack of qualified employees has affected the ability of their firm to do business in Maryland over the past year. This belief is universally shared across different industries and sizes of companies. Concern has also grown since 1997, when 38% held this belief.

Whether Lack of Qualified Employees affects Ability to do Business in Maryland



The lack of skilled employees has impacted businesses in many ways. Of those affected, three-quarters feel that it has lowered their business' level of productivity. Half feel that this has reduced their business' ability to meet deadlines and reduced the quality of their business' products or services. Fewer report considering moving out-of-state perhaps in recognition that the labor shortage is a national problem, not just in Maryland.

Ways Lack of Skilled Employees Impacts Businesses

(% mentioning among those impacted by lack of qualified employees)

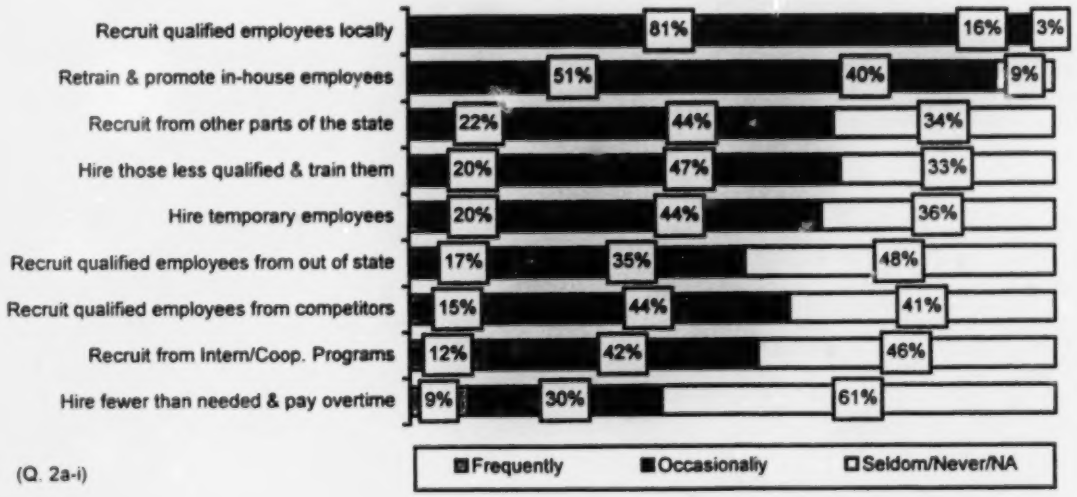
	1997	1999
Lowered my business' level of productivity	84%	76%
Reduced my business' ability to meet deadlines	64%	53%
Reduced the quality of my business' products/ services	53%	51%
Prevented my business from developing new products/services	37%	34%
Prevented my business from expanding its facilities	43%	33%
Limited my business' ability to bid on government contracts	24%	20%
May cause my business to close or move some operations out of state	9%	6%
(Q. 5b) (# of respondents)	(335)	(230)

CURRENT HIRING AND RECRUITING PRACTICES

Nearly all business employers (97%) recruit qualified employees locally, including 81% who do this frequently and 16% who do this occasionally. Nearly all (91%) also retrain and promote in-house employees, including 51% who indicate they do this frequently and 40% who do it occasionally. Other activities used to fill open positions are significantly less common.

Approximately two-thirds of employers at least occasionally recruit qualified employees from other parts of the state, hire less qualified employees and train them, and/or hire temporary employees. Slightly more than half of employers sometimes recruit qualified employees from competitors, recruit from Internship/Cooperative Education Programs, and/or recruit qualified employees from out of state. Only a third are willing to hire fewer employees than needed and pay overtime.

Tactics used to Fill Open Positions



(Q. 2a-i)

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As in 1997, the most frequent practices used to fill open positions are to recruit employees locally or to retrain and promote from within. With the increased difficulties in finding qualified employees, nearly all recruitment practices have increased since 1997. Employers are increasingly going to other parts of the state, out of state or to competitors to find qualified employees. Internships and Cooperative Programs are also being increasingly used to find qualified candidates and fill positions.

Trends in Tactics used to Fill Open Positions

(% frequently or occasionally using specified tactic)

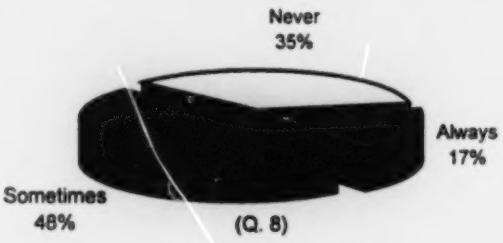
	1997	1999
Recruit qualified employees locally	94%	97%
Retrain & promote in-house employees	90%	91%
Hire those less qualified & train them	66%	67%
Recruit from other parts of the state	49%	66%
Hire temporary employees	51%	64%
Recruit from competitors	39%	59%
Recruit from Intern/coop. programs	38%	54%
Recruit from out of state	36%	52%
Hire fewer than needed & pay overtime	35%	39%

Estimating the cost of recruiting and relocating a new hire is difficult for employers. In the survey pre-test, employers indicated that they could only roughly estimate this cost and if they needed to be more accurate the survey would be delayed and many would not be returned. There was also concern that different individuals would have different assumptions in what might be included in these costs. Ranges of costs were used in the questionnaire so employers could more easily make a rough estimate of cost.

Approximately one-third of employers estimate the cost of recruiting a new hire at the professional level is in excess of $3,000. Another third estimate the cost to be $1,000 to $3,000. Nearly half (44%) estimate the cost to relocate a new employee is in excess of $3,000 with a quarter estimating over $5,000. Other employers pay only a limited portion of these expenses.

Approximate Expenditures for New Hires at the Professional Level

Frequency of Requesting a Transcript to Verify Academic Record of Applicants

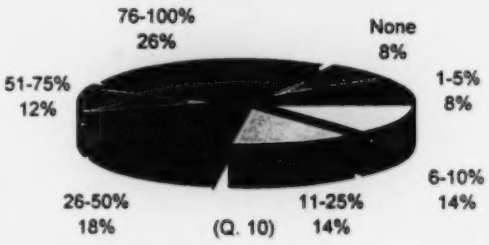


Academic credentials of students are extremely important to employers, as they use such credentials in making hiring decisions. Nearly two-thirds of companies report requesting a transcript to verify academic records of job applicants either always (17%) or sometimes (48%). The incidence of requesting a transcript is higher among larger companies. Roughly half of companies under $5 million in sales may sometimes or always request a transcript while nearly three-quarters of larger companies follow this practice.

EMPLOYER JOB TRAINING ACTIVITIES

Specialized skills training is on the rise among Maryland employers. Nearly all (92%) business employers offer some type of specialized skills training – up from 68% in the 1997 study. In addition, companies offer this training to a large percentage of their workforce. As in 1997, 70% of employers offer training to more than 10% of their workforce annually, including 26% of firms who train more than three-quarters of their workforce each year.

Proportion of Workforce that Annually Participates in Training



Over three-quarters of respondents report having an in-house training department and half use outside consultants and industry or trade associations to provide training. Other significant providers of training for business employees include equipment or software manufacturers and community colleges.

There has been a significant shift in the types of organizations providing outside training to businesses. The share of training provided by colleges and universities has declined from 66% to 26% since 1997. The share of training provided by advanced technology centers and private career schools has also declined. Equipment or software manufacturers provide training to 41% of businesses. This provider may be capturing the share of training formerly being done at colleges and universities.

Types of Organizations Regularly Used for Training

(% using specified type of organization)

	1997	1999
In-house training department	77%	76%
Outside consultants	55%	55%
Industry or trade association	59%	49%
Equipment or software manufacturers	N/A	41%
Community colleges	43%	41%
Colleges or universities	66%	26%
Advanced technology centers	23%	15%
Private career schools	8%	4%
(Q. 11) (# of respondents)	(637)	(519)

It should be noted that the incidence of different organizations providing training for employees rises with the size of the company. Smaller companies are much less likely to have in-house training departments, or to utilize outside consultants, or advanced

technology centers. The very large companies, with over $10 million in sales, are twice as likely to use colleges, universities, and community colleges than smaller companies. The largest source of training for small companies is industry or trade associations.

The average cost per employee to provide training may be declining. In 1997, the average cost was $2,306 to train a new hire, $2,256 to train an existing professional employee, and $1,376 to train an existing non-professional employee. In this study, training cost questions were asked with category responses, so a direct comparison may not be accurate. However, the median training cost was $1,261 for a new hire, $1,322 for an existing professional employee, and $781 for an existing non-professional employee. The decline in training provided by colleges and universities and the possible increase in training by equipment or software manufacturers lends credibility to the finding that training costs are much lower than in 1997. The types of training required have probably remained consistent over the past three years, lessening the need for more expensive customized training.

For most companies, the government is not a source of external funds for training. Only 19% of companies report receiving external funds for training from the government including 15% from State government, 4% from the Federal government, and 4% from Local government. This training is concentrated among larger companies: 24% with over $10 million in sales received assistance compared to around 10% of companies with under $5 million in sales. It is also more likely to have been used by the manufacturing industry and the education and public administration sectors.

Reasons for providing training range from improving computer-related skills to personal or career development and basic skills. Three quarters of business employers provide training to improve computer and technology skills. More than half provide training for technical skills and to provide certification or licensing. The large incidence of usage for certification may relate to the increased use of equipment and software manufacturers, as employees may be obtaining certification for technical skills from companies like Microsoft and Novell.

After technology, the next most heavily used type of training is for interpersonal skills such as teamwork, promoting personal and career development, and other courses to improve productivity.

Roughly a third of employers provide training for basic work habits, oral communication skills, and problem solving skills.

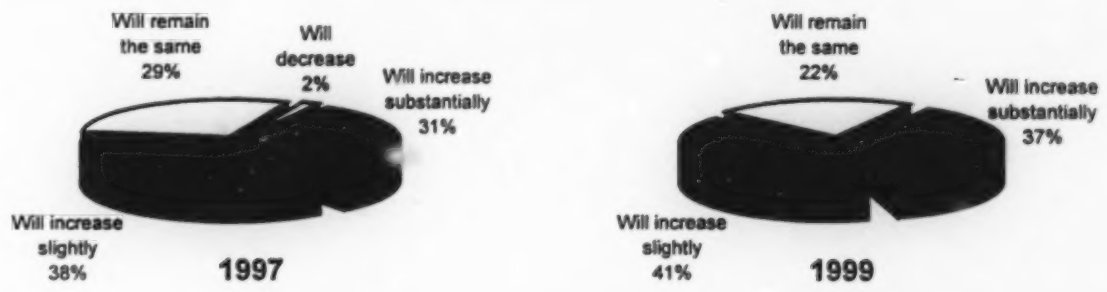
Reasons for Providing Employee Training Over the Past Year

(% mentioning specified reason)

To improve computer & technology skills	75%	To improve problem solving skills	31%
To improve technical skills	56%	To introduce a new product line	29%
To provide for certification or licensing	55%	To assure success over competition	28%
To improve interpersonal skills (i.e., teamwork)	54%	To improve written communication skills	26%
To promote personal/career development	49%	To improve math/calculation skills	13%
To introduce new technology requiring new skills	47%	To improve attendance/punctuality	9%
To improve productivity	44%	To improve reading skills	8%
To develop more positive attitudes/work habits	38%	None of these reasons	4%
To improve oral communication skills	33%		
(Q. 16)		(# of respondents)	(507)

Over three quarters of firms (79%) expect their need for training to increase over the next five years, including 37% who expect a substantial increase and 41% who expect a slight increase. There is an increasing need for training since the last study. In 1997, 69% expected increasing needs for training compared to 79% in this study.

Anticipated Changes in Training Needs Over the Next Five Years



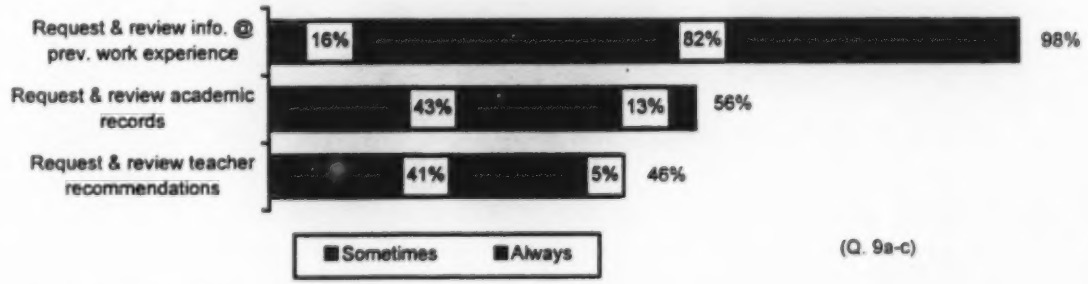
EMPLOYER HIRING OF PERSONS WITH A HIGH SCHOOL DIPLOMA OR LESS

A labor shortage has raised demands for employees with varying levels of education. Nearly three-quarters (71%) of companies hire employees whose highest educational credential is a recent high school diploma or GED certificate. This is an increase from 1997 when 63% hired high school graduates or less.

The academic credentials of those applying for jobs requiring a high school education or less are very important. More than half of employers report requesting and reviewing academic records either sometimes (43%) or always (13%). Nearly half report requesting and reviewing teacher recommendations. However, the most important qualification is previous work experience. All employers (98%) request and review information about previous work experience with most (82%) always requiring this information. As was the case with requesting transcripts, larger companies are more likely to request academic records or review teacher recommendations than smaller companies.

Extent of Background Check on Potential Employees

(among those hiring workers whose highest educational credential is H.S. diploma or G.E.D.)



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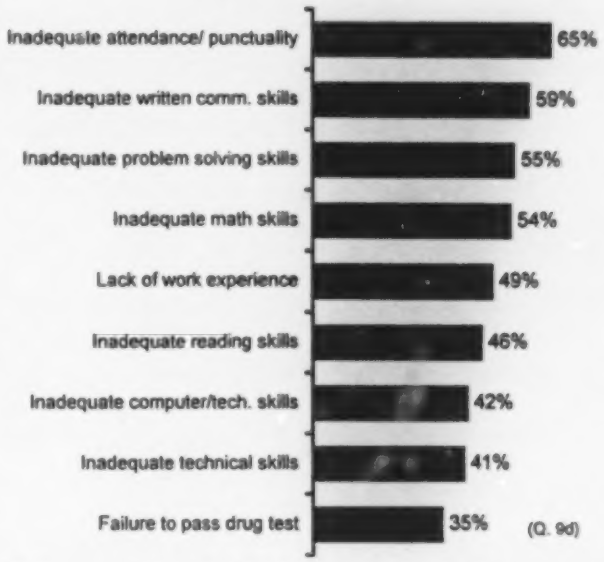
In the previous study, questions relating to the review of records for positions requiring a high school degree or less required a "yes" or "no" response, so direct comparisons to questions rated "always," "sometimes" or "never" are not precise. However, as found in this study, nearly all employers in the 1997 study reviewed previous work experience. Only 15% reviewed academic records in 1997 compared to 56% who sometimes or always reviewed these records in this study. Only 21% reviewed teacher recommendations in 1997 compared to 46% who sometimes or always reviewed these records in this study. While direct comparisons cannot be made, it does appear that more employers are relying on academic records, possibly replacing the need to obtain teacher recommendations.

Difficulties in Finding Qualified Applicants with a H.S. Diploma or less

(% citing specified reason)



Many reasons were cited for employers having difficulties finding qualified applicants for jobs requiring a high school diploma. Inadequate attendance and punctuality was cited most frequently by two-thirds of employers. Inadequate written communication, problem solving, and math skills were cited by more than half of employers. Failure to pass a drug test was cited as a problem by 28% of companies in 1997 and has increased to 35% in this study.

REGIONAL TRENDS

Determining trends by region is somewhat hampered by small sample sizes in rural areas, but following are some observations:

- Needs for clerical, administrative and secretarial personnel are less acute in rural areas such as Southern and Western Maryland.
- On the Eastern Shore, there are more apparent needs for supervisory or managerial personnel and computer technicians and operators.
- On both the Eastern Shore and in Western Maryland, there are insufficient Laboratory or Technical personnel.
- Suburban Washington has a greater deal of difficulty hiring unskilled workers or laborers.
- Rural areas generally have fewer problems finding employees with lower levels of educational attainment.

- Rural areas are more likely to experience an increasing need for workers who have community college degrees. Rural areas are also more likely to use community colleges for employee training.
- The Eastern Shore is more active in recruiting employees from their competition. Firms on the Eastern Shore are more likely to feel that a lack of qualified employees has affected their ability to do business in Maryland. They are more active in acquiring external funds from State government for training.
- Respondents in Southern Maryland generally gave more favorable ratings on the effectiveness of educational institutions than other regions.
- Suburban Washington generally gave higher ratings to educational institutions than Suburban Baltimore employers.

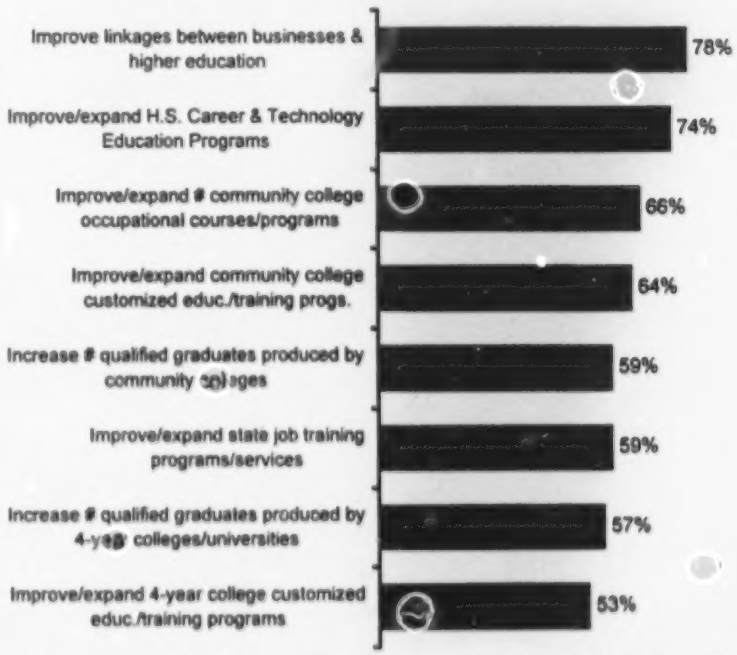
WHAT SHOULD THE STATE DO?

Most employers believe all of the suggested state policy actions to improve job skills in the workforce are important, although some are more preferred over others. The same top four issues were also ranked most important in the 1997 study.

- Three-quarters feel it is important to improve linkages between business and higher education such as collaborative ventures, partnerships, internships and mentoring programs.
- Three-quarters also feel it is important to improve or expand career and technology education programs.
- Two-thirds consider it important to improve or expand the number of occupational courses and programs offered by community colleges
- Two-thirds also believe it is important to improve or expand the customized education and training programs community colleges offer.

Importance of Alternative State Policy Actions

(% rating alternative as of above average importance)*



*A 4 or 5 rating on a 5-point scale where 5=extremely important and 1=not at all important (Q. 18a-h)

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Demographic Profile of Study Respondents

Company Location:	
Suburban Baltimore	46%
Suburban Washington	27%
Western Maryland	9%
Lower Eastern Shore	7%
Upper Eastern Shore	6%
Southern Maryland	5%
	100%
(# of respondents)	(495)

1998 Number of Employees in Maryland:	
1 – 9 Employees	9%
10 – 24	9%
25 – 49	15%
50 – 99	21%
100 – 249	21%
250 – 499	11%
599 – 999	4%
1,000 or more Employees	10%
	100%
Median # of Employees	89.6
(# of respondents)	(484)

1998 Gross Sales for Md. Base of Operations:	
Less than $1 million	14%
$1 - $4.9 million	23%
$5 - $9.9 million	18%
$10 - $24.9 million	18%
$25 - $99.9 million	13%
$100 million or more	14%
	100%
Median Gross Sales	$8.5 mil.
(# of respondents)	(414)

Primary Type of Business:	
Manufacturing	20%
Services	14%
Financial Services	6%
Hospital/Health Services	6%
Engineering/Architecture	5%
Contractors	4%
Associations/Non-Profits	4%
Education	4%
Technology	4%
Hotels and Lodging	3%
Transportation	3%
Insurance	3%
Printing	3%
Retailing	3%
Communications/Utilities	3%
Computer-Related Fields	2%
Wholesalers	2%
Restaurants	2%
Publishing	2%
Accounting	1%
Legal Services	1%
Entertainment	1%
Real Estate	1%
Public Administration/Government	1%
Mining	*
Broadcasting	*
Advertising	*
	100%
(# of respondents)	(512)

*Less than 1%

APPENDIX:
SURVEY INSTRUMENT

MARYLAND BUSINESS ROUNDTABLE FOR EDUCATION

June 10, 1999

Maryland's 2nd Workforce Skills Survey
Co-sponsored by
Maryland Business Roundtable for Education
Maryland Economic Development Commission
Maryland Department of Business and Economic Development
Maryland State Department of Education
Maryland Higher Education Commission

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Sanford I. Weill
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Citigroup

EXECUTIVE DIRECTOR
June E. Streckfus

Dear Business Leader:

You can help improve the quality of your employees and shape Maryland's future workforce in just 15 minutes –

- By completing the attached survey, you can make educators and economic development leaders statewide aware of the expectations your business has for employees as they enter the workforce.

- The survey's results also will enable Maryland to develop programs that ensure future employees have the skills they need to succeed at work and in life.

Two years ago, Maryland employers were asked to participate in the state's first major survey to determine workforce needs and employer satisfaction with recent graduates. The results of the survey helped to support higher academic standards and more challenging curricula in Maryland's public schools. That, in turn, is helping us to create a workforce that is better prepared to enter the workplace.

Now, we need your help again. Completing the survey (or forwarding it to the appropriate person in your company) will ensure the validity and reliability of the data we gather. Note that questions should be answered for your entire company (not for a single department). **All responses will be kept confidential** and will not be published in any manner that allows identification of your company. Please return the survey in the enclosed envelope **by July 15, 1999**.

Thank you for helping us make the right choices to ensure that Maryland's workforce will be second to none. If you have any questions regarding the survey, please contact Sally Scott Marietta at 410/767-6309.

Sincerely,

Raymond A. "Chip" Mason
Chairman, MBRT Board of Directors

P.S. Please help us produce a world-class workforce for Maryland by completing the attached survey. Results will be sent to all participating companies.

STATE COALITION OF THE YEAR AWARD

111 S. Calvert Street
Suite 1720
Baltimore, MD 21202
(410) 727-0108
FAX (410) 727-7609

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MARYLAND WORKFORCE EDUCATIONAL NEEDS ASSESSMENT

This survey of Maryland companies seeks to identify employment, educational, and workforce skills development issues facing the State's business community. The information collected through this survey will be used to develop programs and legislative initiatives to better meet the Maryland workforce needs of the business community. Your participation is crucial to the success of this project.

We assure you that your responses will be kept confidential. Only aggregate data will be used in our analysis.

I. Current and Future Hiring Practices In Maryland

1. For each of the following job classifications, please describe the degree of difficulty your firm has experienced in hiring qualified workers in the past year:

	Little or No Difficulty	*Some Difficulty*	*A Great Deal Of Difficulty*	*Not Applicable*
a. Clerical, Administrative, Secretarial	1 ☐	2 ☐	3 ☐	0 ☐
b. Supervisory or Managerial Personnel	1 ☐	2 ☐	3 ☐	0 ☐
c. Sales or Marketing Personnel	1 ☐	2 ☐	3 ☐	0 ☐
d. Manufacturing or Skilled Workers	1 ☐	2 ☐	3 ☐	0 ☐
e. Unskilled Workers or Laborers	1 ☐	2 ☐	3 ☐	0 ☐
f. Laboratory or Technical Personnel	1 ☐	2 ☐	3 ☐	0 ☐
g. Computer Technicians or Operators	1 ☐	2 ☐	3 ☐	0 ☐
h. Computer Engineers or Analysts	1 ☐	2 ☐	3 ☐	0 ☐
i. Engineers (non-computer)	1 ☐	2 ☐	3 ☐	0 ☐
j. Scientists	1 ☐	2 ☐	3 ☐	0 ☐
k. Other (_____)	1 ☐	2 ☐	3 ☐	0 ☐

2. Please describe how often your firm engages in the following activities to fill open positions:

	Frequently	*Occasionally*	*Seldom or Never*	*Not Applicable*
a. Recruit qualified employees locally	1 ☐	2 ☐	3 ☐	0 ☐
b. Recruit qualified employees from other parts of the state	1 ☐	2 ☐	3 ☐	0 ☐
c. Recruit qualified employees from out of state	1 ☐	2 ☐	3 ☐	0 ☐
d. Recruit qualified employees from competitors	1 ☐	2 ☐	3 ☐	0 ☐
e. Recruit from Internship/Cooperative Education Programs	1 ☐	2 ☐	3 ☐	0 ☐
f. Re-train and promote in-house employees	1 ☐	2 ☐	3 ☐	0 ☐
g. Hire less qualified employees and train them	1 ☐	2 ☐	3 ☐	0 ☐
h. Hire fewer employees than needed and pay overtime	1 ☐	2 ☐	3 ☐	0 ☐
i. Hire temporary employees	1 ☐	2 ☐	3 ☐	0 ☐

3. Approximately what is your average expenditure for recruiting a new hire at the professional level?

1 ❑ Under $500 2 ❑ $500-$1000 3 ❑ $1000-$3000 4 ❑ $3000-$5000 5 ❑ Over $5000

4. Approximately what is your average expenditure for relocating a new hire at the professional level?

1 ❑ Under $500 2 ❑ $500-$1000 3 ❑ $1000-$3000 4 ❑ $3000-$5000 5 ❑ Over $5000

5a. Has a lack of qualified employees affected the ability of your firm to do business in Maryland over the past year?

1 ❑ Yes 2 ❑ No *(Go to Ques. 6)*

b. If you answered Yes above, please indicate in which of the following ways. (*Check all that apply*)

1 ❑ Prevented my business from expanding its facilities

2 ❑ Prevented my business from developing new products or services

3 ❑ Lowered my business' level of productivity

4 ❑ Reduced the quality of my business' products or services

5 ❑ Limited my business' ability to bid on government contracts

6 ❑ Reduced my business' ability to meet deadlines

7 ❑ May cause my business to close or move some operations out of state

8 ❑ Describe other_____

6. Using a rating scale of one through five, with the low score of one indicating poor, up through the high score of five indicating excellent, how would you rate the effectiveness in general of each of the following Maryland educational institutions in providing your company with a qualified and educated workforce that meets the needs of your business?

	Excellent				*Poor*
a. Public high schools	5 ❑	4 ❑	3 ❑	2 ❑	1 ❑
b. Private high schools	5 ❑	4 ❑	3 ❑	2 ❑	1 ❑
c. High school career and technology education programs	5 ❑	4 ❑	3 ❑	2 ❑	1 ❑
d. Community colleges	5 ❑	4 ❑	3 ❑	2 ❑	1 ❑
e. Undergraduate programs at public 4-year colleges and universities	5 ❑	4 ❑	3 ❑	2 ❑	1 ❑
f. Graduate programs at public 4-year colleges and universities	5 ❑	4 ❑	3 ❑	2 ❑	1 ❑
g. Undergraduate programs at private 4-year colleges and universities	5 ❑	4 ❑	3 ❑	2 ❑	1 ❑
h. Graduate programs at private 4-year colleges and universities	5 ❑	4 ❑	3 ❑	2 ❑	1 ❑
i. Private career schools	5 ❑	4 ❑	3 ❑	2 ❑	1 ❑

7a. Please describe the degree of difficulty your firm has experienced in hiring qualified workers in each of the following educational attainment categories over the past year.

b. Then indicate whether you think your business' needs for workers with these educational attainment levels will increase, decrease or stay about the same over the next five years.

7a. Past Year					7b. Over next Five Years			
Haven't Needed	*Little Or No Difficulty*	*Some Difficulty*	*A Great Deal of Difficulty*		*Not Applicable*	*Decrease*	*Remain About The Same*	*Increase*
0 ☐	1 ☐	2 ☐	3 ☐	a. Less than high school	0 ☐	1 ☐	2 ☐	3 ☐
0 ☐	1 ☐	2 ☐	3 ☐	b. High school only (other than career and technology education programs)	0 ☐	1 ☐	2 ☐	3 ☐
0 ☐	1 ☐	2 ☐	3 ☐	c. High school career and technology education programs	0 ☐	1 ☐	2 ☐	3 ☐
0 ☐	1 ☐	2 ☐	3 ☐	d. Community college degree or certificate	0 ☐	1 ☐	2 ☐	3 ☐
0 ☐	1 ☐	2 ☐	3 ☐	e. Bachelor's degree in liberal arts and sciences	0 ☐	1 ☐	2 ☐	3 ☐
0 ☐	1 ☐	2 ☐	3 ☐	f. Bachelor's degree in Technical/professional field (such as business, computer science, engineering)	0 ☐	1 ☐	2 ☐	3 ☐
0 ☐	1 ☐	2 ☐	3 ☐	g. Graduate or Professional degree	0 ☐	1 ☐	2 ☐	3 ☐
0 ☐	1 ☐	2 ☐	3 ☐	h. Private career school certificate	0 ☐	1 ☐	2 ☐	3 ☐
0 ☐	1 ☐	2 ☐	3 ☐	i. Private educational services (training and development consultants)	0 ☐	1 ☐	2 ☐	3 ☐

8. In assessing job applicants, do you request a transcript to verify academic records?

1 ☐ Always 2 ☐ Sometimes 3 ☐ Never

9. Does your firm hire people whose highest educational credential is a recent (within 5 years) high school diploma or GED certificate?

1 ☐ Yes *(Continue with a. - d.)* 2 ☐ No *(Go to Section II)*

a. Do you request and review academic records?

1 ☐ Always 2 ☐ Sometimes 3 ☐ Never

b. Do you request and review information about previous work experience?

1 ☐ Always 2 ☐ Sometimes 3 ☐ Never

c. Do you request and review teacher recommendations?

1 ☐ Always 2 ☐ Sometimes 3 ☐ Never

d. Listed below are reasons businesses cite for **not finding qualified** job applicants with a high school diploma. *Please check all that apply for your business:*

1 ☐ Inadequate attendance and punctuality
2 ☐ Inadequate reading skills
3 ☐ Inadequate written communication skills
4 ☐ Inadequate math and calculation skills
5 ☐ Inadequate computer and technology skills
6 ☐ Inadequate problem solving skills
7 ☐ Inadequate technical skills
8 ☐ Lack of work experience
9 ☐ Failure to pass drug test
10 ☐ Specify Other_____

II. Current and Future Employee Training Practices

10. Annually, approximately what percentage of your Maryland workforce participates in formal, company sponsored, specialized skills training ?

1 ❑ 0% (None) 3 ❑ 6-10% 5 ❑ 26-50% 7 ❑ 76-100%
2 ❑ 1-5% 4 ❑ 11-25% 6 ❑ 51-75%

11. Which of the following types of organizations does your organization regularly use to provide training to your employees? (*Check all that apply*)

1 ❑ In-house training department 5 ❑ Colleges or universities
2 ❑ Outside consultants 6 ❑ Private career schools
3 ❑ Industry or trade association 7 ❑ Advanced technology centers
4 ❑ Community colleges 8 ❑ Equipment or software manufacturers
9 Describe other_____ 10 ❑ None/Not applicable

12. Approximately what is your average annual expenditure for training a new hire?

1 ❑ $0/NA 3 ❑ $500-$1000 5 ❑ $3000-$5000
2 ❑ Under $500 4 ❑ $1000-$3000 6 ❑ Over $5000

13. Approximately what is your average annual expenditure for training an existing professional employee upgraded or additional skills?

1 ❑ $0/NA 3 ❑ $500-$1000 5 ❑ $3000-$5000
2 ❑ Under $500 4 ❑ $1000-$3000 6 ❑ Over $5000

14. Approximately what is your average expenditure for training an existing non-professional employee upgraded or additional skills?

1 ❑ $0/NA 3 ❑ $500-$1000 5 ❑ $3000-$5000
2 ❑ Under $500 4 ❑ $1000-$3000 6 ❑ Over $5000

15. From which of the following governmental sources does your company receive external funds for training? *[Please check all sources that apply]*

0 ❑ None 1 ❑ Federal 2 ❑ State 3 ❑ Local 4 ❑ Specify Other_____

16. Has your firm provided employee training for any of the following reasons over the past year?

1 ❑ To improve reading skills
2 ❑ To improve written communication skills
3 ❑ To improve oral communication skills
4 ❑ To improve math and calculation skills
5 ❑ To improve computer and technology skills
6 ❑ To improve technical skills
7 ❑ To improve problem solving skills
8 ❑ To improve attendance and punctuality
9 ❑ To improve interpersonal skills (i.e. teamwork)
10 ❑ To introduce a new product line
11 ❑ To introduce a new technology that requires new skills
12 ❑ To improve productivity
13 ❑ To assure success over competition
14 ❑ To promote the personal and/or career development of employees
15 ❑ To help employees develop more positive attitudes & work habits
16 ❑ To provide for certification or licensing
17 ❑ None of the above

17. Over the next five years, will your company's need for training:

1 ☐ Increase substantially 3 ☐ Remain the same 3 ☐ Remain the same

2 ☐ Increase slightly 4 ☐ Decrease slightly

III. State Policy Actions

18. Using a rating scale of one through five, with the high score of five indicating extremely important, down through the low score of one indicating not at all important, how important do you consider each of the following actions that could be taken by the State of Maryland to improve the job skills of your workforce?

	Extremely Important				*Not at all Important*
a. Improve or expand job training programs and services provided by State or local agencies	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐
b. Improve or expand career and technology education programs	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐
c. Improve or expand the number of occupational courses and programs offered by community colleges	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐
d. Improve or expand customized education and training programs for businesses offered by community colleges	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐
e. Improve or expand customized education and training programs for businesses offered by 4-year public or private colleges and universities	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐
f. Increase the number of qualified graduates produced by community colleges	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐
g. Increase the number of qualified graduates produced by 4-year public or private colleges and universities	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐
h. Improve linkages between businesses and higher education, such as collaborative ventures, partnerships, internships, and mentoring programs	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐

19. Basing your responses on actual hiring experiences at your company, please indicate below :

a. The specific academic fields or occupations for which you have both a strong current need **and** have had difficulty attracting a sufficient number of qualified applicants.

b. For each academic field or occupation, please also indicate the appropriate level(s) of study for which employees are currently needed.

Academic Field/Occupation	H.S. Diploma	Private Career School Certif.	Comm. College Degree/Certif.	Bachelor's Degree	Master's Degree	Doctoral/Prof. Degree
1. _____	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
2. _____	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
3. _____	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
4. _____	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
5. _____	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐

20. Company Name: _____

21. Company City / County: _____

22. Company Zip Code: _____

23. What is the primary type of business or service in which your company is involved? Select one category:

1 ❑ Accounting
2 ❑ Advertising
3 ❑ Associations
4 ❑ Broadcasting
5 ❑ Communications / Utilities
6 ❑ Contractors
7 ❑ Education
8 ❑ Engineering / Architecture
9 ❑ Hospitals / Health Services
10 ❑ Hotels and Lodging
11 ❑ Insurance
12 ❑ Financial/Banking/Investment Services
13 ❑ Legal Services
14 ❑ Manufacturing
15 ❑ Mining
16 ❑ Petroleum and Coal
17 ❑ Printing
18 ❑ Public Administration
19 ❑ Publishing
20 ❑ Real Estate
21 ❑ Retailing
22 ❑ Restaurants
23 ❑ Services
24 ❑ Transportation
25 ❑ Wholesalers
26 ❑ Other (Specify _____)

24. 1998 Number of employees in Maryland

1 ❑ 1-9 2 ❑ 10–24 3 ❑ 25–49 4 ❑ 50-99
5 ❑ 100-249 6 ❑ 250–499 7 ❑ 500–999 8 ❑ 1,000 or more

25. 1998 Gross sales for Maryland base of operations, in millions.

1 ❑ Less than $1M 2 ❑ $1-$4.9M 3 ❑ $5-$9.9M 4 ❑ $10-$24.9M
5 ❑ $25-$49.9M 6 ❑ $50-$99.9M 7 ❑ $100-$499.9M 8 ❑ $500M or more

Please indicate here if you would like results of this survey sent to you. ❑ Yes ❑ No
If yes, to whom should it be addressed?

NAME: _____

ADDRESS: _____

_____

_____

Thank you for completing this survey. Please return it in the accompanying envelope, or mail it to:

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